



National Science Foundation • Office of Inspector General
2415 Eisenhower Avenue, Alexandria, VA 22314

MEMORANDUM

DATE: February 22, 2019

TO: Dr. France Córdova, Director

Ms. Teresa Grancorvitz, Chief Financial Officer

FROM: Mark Bell, Assistant Inspector General, Office of Audits

SUBJECT: National Science Foundation FY 2018 Management Letter

Attached is the National Science Foundation Fiscal Year 2018 Management Letter prepared by Kearney and Company. The letter includes observations and suggestions identified during the FY 2018 audit of NSF's financial statements (five new observations and three repeat/revised observations) that were not considered to be significant deficiencies in FY 2018. A draft of this report was previously submitted to your staff for comment and their comments were considered in preparing this final report.

We will not be tracking the corrective actions to this report separately, so we are not requesting a corrective action plan. However, Kearney will be following-up on these issues during the FY 2019 financial statement audit process.

We appreciate the cooperation that was extended to Kearney and us during this audit. If you have any questions, please call me at 703-292-7100 or Catherine Walters at 703-292-5018.

Attachment

cc: Diane Souvaine Mary Lou Tillotson
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MANAGEMENT LETTER

To the Director and the Inspector General of the National Science Foundation

In planning and performing our audit of the National Science Foundation (NSF)'s financial statements as of and for the year ending September 30, 2018, in accordance with auditing standards generally accepted in the United States of America; standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and Office of Management and Budget (OMB) Bulletin 19-01, *Audit Requirements for Federal Financial Statements*, Kearney & Company, P.C. (defined as "Kearney," "we," and "our" in this letter) considered NSF's internal control over financial reporting and compliance with provisions of applicable laws, regulations, contracts, and grant agreements in order to determine our auditing procedures for the purpose of expressing an opinion on the financial statements, and not to provide assurance on internal control over financial reporting or on compliance. Accordingly, we do not express an opinion of the effectiveness of NSF's internal control over financial reporting or on its compliance.

Our *Independent Auditor's Report on Internal Control Over Financial Reporting*, dated November 14, 2018, noted no material weaknesses or significant deficiencies.

Although not considered to be material weaknesses or significant deficiencies, we noted certain matters involving internal control that are presented in this letter for NSF's consideration. These observations and suggestions are intended to assist in improving NSF's internal control or result in other operating efficiencies. We have not considered NSF's internal control since November 14, 2018.

We appreciate the courteous and professional assistance that NSF's personnel extended to us during our audit. We would be pleased to discuss our observations and suggestions with NSF at any time.

The purpose of this letter is solely to communicate other deficiencies in internal control or any non-compliance noted during the audit to management and those charged with governance, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. Accordingly, this communication is not suitable for any other purpose.



Alexandria, Virginia
February 20, 2019



MANAGEMENT LETTER COMMENTS

STATUS OF PRIOR YEAR MANAGEMENT LETTER FINDINGS

During the audit of the NSF’s fiscal year (FY) 2017 financial statements, Kearney identified matters that were reported in an internal control report and a management letter. During the audit of the FY 2018 financial statements, Kearney assessed the status of the prior-year deficiencies. As described in the table below, three of the items reported in the FY 2017 Financial Management Letter were closed. Three control deficiencies reported in FY 2017 remained open; its FY 2018 status is provided below.

PY No.	Financial - FY 2017 Management Letter Findings	Status
2017-FR-01	Payroll Personnel Actions	Open
2017-FR-02	Monitoring and Oversight over Undelivered Orders	Open
2017-FR-03	Property Additions and Deletions*	Open
2017-FR-04	Insufficient Approval and Untimeliness of Travel Vouchers	Closed
2017-FR-05	Insufficient Monitoring over Grant Post-Award Procedures	Closed
2017-FR-06	Related Parties Disclosure	Closed

*Note: As discussed with NSF, Kearney separated the Property NFR into two separate NFRs for FY 2018 in order to differentiate between Internal and External property findings.

As part of the FY 2018 financial statement audit, Kearney also assessed the status of information technology deficiencies reported. As described in the table below, five of the items reported in the FY 2017 Information Technology Management Letter were closed. No control deficiencies reported in FY 2017 remained open and two new deficiencies were identified; their FY 2018 status is provided below.

PY No.	IT - FY 2017 Management Letter Findings	Status
2017-IT-01	Active Directory User Account Termination	Closed
2017-IT-02	Awards Application New User Provisioning	Closed
2017-IT-03	Monitoring of Awards Operating System and Database Audit Logs	Closed
2017-IT-04	WebTA Account Management	Closed
2017-IT-05	iTRAK Security Confirmations and Monitoring of Audit Logs	Closed
N/A	NSF Account Recertification Weakness	New
N/A	Awards Operating System (OS) and Database (DB) New User Provisioning	New

MODIFIED REPEAT MANAGEMENT LETTER COMMENTS

1. Property (Internal)

NFR 2018-FR-01: Insufficient Controls over Recording Internal Property Transactions

(Note: This NFR is derived from the ‘Property Additions and Deletions’ management letter comment noted on the table above. As discussed with NSF, Kearney separated the Property NFR into two separate NFRs in order to differentiate between Internal and External property findings.)

Background:

NSF records asset additions through purchase, gain-by-inventory (i.e., lost/found), transfer from another entity, or construction. NSF capitalizes general Property, Plant, and Equipment (PP&E) with an acquisition cost of \$25,000 or greater and a useful life of two or more years.

Depreciation of property is calculated based on the straight-line method using a half-year convention. NSF does not have a property sub-ledger system in its financial reporting system, iTRAK; asset activity (e.g., additions, deletions, transfers, depreciation, etc.) is recorded via journal vouchers (JV) as part of the quarterly property reporting process. NSF uses a separate program, the Asset Management System (AMS), to track property acquisitions and disposals for inventory management purposes.

Observations:

During the FY 2017 audit, NSF inaccurately recorded internal capital equipment acquisition costs. NSF did not provide sufficient documentation to corroborate an asset acquisition’s cost. NSF has continued taking steps in FY 2018 to resolve prior year issues by strengthening and streamlining its property acquisition processes; however, new types of discrepancies (i.e., improper capitalization of property, recording incorrect acquisition costs) were noted during FY 2018. Therefore, improvements are still needed to the internal control process over the acquisition and recording of internal capital asset additions.

We selected and tested six out of 12 internal capital equipment transactions that were recorded from October 1, 2017 to June 30, 2018. Three instances were identified (i.e., one laptop and two copiers) in which the assets should not have been classified as capital equipment. As a result of additional testing, we noted that NSF erroneously recorded an additional four assets (i.e., one laptop and three copiers) as capital equipment. Specifically:

- **Inaccurate Acquisition Cost** – NSF incorrectly recorded two laptops at an acquisition cost of \$161,815 each in two separate transactions. However, the correct acquisition cost for the laptops was \$1,618 each, which is below the capital equipment acquisition cost capitalization threshold.
- **Improper Capitalization of Asset** – NSF received copiers as part of an interagency service-type agreement, which states that NSF does not own the equipment. However, NSF recorded the cost of the copiers as capital equipment additions in its financial system

of record, iTRAK. The recorded cost of the copiers was \$65,651 (two copiers) and \$125,629 (three copiers).

Suggestions:

We suggest that NSF should:

1. Strengthen internal controls over the review and approval of data entered into AMS; review, revise (if necessary), and define the flag identifiers used in AMS; and conduct appropriate training for applicable NSF DAS personnel over capital equipment acquisitions to ensure property transactions are tracked accurately.
2. Update standard operating procedures (SOP) or formally written process (equivalent) that emphasize the importance of properly accounting for equipment acquisitions via service-type agreements to ensure adequate property accounting treatment.

2. Undelivered Orders

NFR 2018-FR-03: Monitoring and Oversight over Undelivered Orders Needs Improvement
(Note: This NFR is derived from the ‘Monitoring and Oversight over Undelivered Orders’ management letter comment noted on the table above)

Background:

Obligations are definite commitments that will result in outlays, immediately or in the future. NSF records obligations in its financial management system when it enters into an agreement, such as a contract or purchase order, to purchase goods and services. Once recorded, obligations remain open until they are fully reduced by a disbursement, are de-obligated, or until the appropriation funding the obligations is cancelled. NSF reduces the obligated balance when payments are made. The undelivered orders (UDO) balance represents the cumulative amount of orders, contracts, and other binding agreements for which payment has not yet been made.

Agencies should maintain policies, procedures, and information systems to ensure that UDOs continue to represent required future Federal outlays. NSF has developed and implemented policies and procedures for the contract closeout process that include the de-obligation of excess funds. During the closeout process, NSF uses a Contractor Performance Evaluation (CPE) form to document the end of a contract or interagency agreement to determine whether the outstanding funds can be de-obligated and ultimately close the undelivered order. NSF has also developed and implemented policies and procedures for authorized travel-related processes to include the de-obligation of excess funds. For NSF employee travel (i.e., travel via Concur), de-obligation of funds should occur within 90 days from the last date of the employee’s travel. For NSF meeting participant travel (e.g., panels, advisory committee, and site visits via Guest), de-obligation of funds occurs after panel/meetings have concluded and travel expenditures are posted into iTRAK.

As of June 30, 2018, NSF reported more than \$425.8 million in non-grant related UDOs, from annual, multi-year, and no-year appropriations.

Observations:

During FY 2017, invalid open UDOs were identified related to non-federal (contract-related) and federal (interagency agreement) obligations. NSF has continued taking steps in FY 2018 to resolve prior year issues by implementing policies and procedures and streamlining UDO periodic reviews. Although the quantity of invalid UDOs noted during FY 2018 has decreased (12 in FY 2017 and five in FY 2018), improvements are still needed regarding internal controls over UDO validity.

During FY 2018, 41 obligations were tested, totaling \$43.9 million, out of a population of 2,721 UDO's, totaling \$91.5 million as of June 30, 2018. We focused our testing on those UDOs that had no activity during FY 2018, because we considered them to have a higher-risk for invalidity. These outstanding obligations were for contracts, travel, and interagency agreements. The following represents the UDO issues noted regarding contract and travel-related obligations:

Non-Federal (Contract related) UDOs: One outstanding obligation for \$389,719 was noted during the prior year audit as an UDO issue (i.e., no disbursement activity since July 2016), however; the UDO had not yet been de-obligated as of June 30, 2018. NSF experienced significant delays with the contractor which prevented the timely de-obligation of the UDO.

Non-Federal (Travel related) UDOs: NSF travel consisted of panel related obligations, in which all panelists had been completely reimbursed. However, the remaining funds were not de-obligated in a timely manner (i.e., over a year) for four travel-related transactions, totaling \$31,394.

Suggestions:

We suggest that NSF:

1. Strengthen and reinforce policies and procedures to require and enable proper coordination and communication between applicable NSF Divisions and Program Offices to perform adequate oversight over stale UDOs to determine the validity of obligations and to de-obligate funds in a timely manner.
2. Strengthen and reinforce the requirement to complete the monthly Open Obligations Reports to include properly coordinating with applicable program offices to confirm and determine whether unliquidated obligations remain valid or should be de-obligated (e.g., contract and travel related funds).

3. Property (External)

NFR 2018-FR-02: Inaccurate and Untimely Recording of External Property Transactions

(Note: This NFR is derived from the 'Property Additions and Deletions' management letter comment noted on the table above. As discussed with NSF, Kearney separated the Property NFR into two separate NFRs in order to differentiate between Internal and External property findings.)

Background:

NSF records asset additions through purchase, gain-by-inventory (i.e., lost/found), transfer from another entity, or construction. NSF capitalizes general Property, Plant, and Equipment (PP&E) with an acquisition cost of \$25,000 or greater and a useful life of two or more years.

Depreciation of property is calculated based on the straight-line method using a half-year convention. NSF does not have a property sub-ledger system in its financial reporting system, iTRAK; rather, asset activity (e.g., additions, deletions, transfers, depreciation, etc.) is recorded via journal vouchers (JV) as part of the quarterly property reporting process.

NSF uses contractors (e.g., Leidos, SPAWAR) to carry out Antarctic support related missions and objectives. Under these contractual agreements, contractors request and purchase capital equipment on behalf of NSF to perform their agreed upon duties and responsibilities. Although contractors procure the capital equipment, NSF remains as the owner of these assets. On a quarterly basis, contractors provide NSF with capital equipment activity (e.g., additions, deletions, transfers, depreciation schedule, etc.). NSF reviews the activity provided by the contractors and uses the information to record its capital equipment activity via JV in iTRAK.

NSF records asset acquisitions at the original cost of the asset. Assets transferred to NSF from other entities are reported at net book value (NBV) or the value assigned by the donating agency, if provided. The acquisition cost of the asset includes all costs associated with placing the asset into service (e.g., purchase cost, shipping/freight, installation costs, etc.). Based on the type of property acquired, a useful life is assigned to each asset to calculate and record depreciation.

NSF disposes of assets when they are lost, damaged, or no longer useful to operations or mission objectives. When disposal of an asset occurs, this must be documented via a Property Adjustment Document (PAD) form and either appropriate transfer documents or the OPP Capital Property Certificate of Disposal Form.

Observations:

During the FY 2017 audit, NSF inaccurately recorded external capital equipment acquisition costs. Further, NSF provided insufficient documentation to corroborate an asset's acquisition cost or corroborate the physical disposal of capital equipment. NSF continues taking steps in FY 2018 to resolve prior year issues by strengthening and streamlining its property acquisition and disposal processes; however, similar discrepancies continued to be identified during the FY 2018

audit. Therefore, internal control improvement over the acquisition and disposal processes for external capital equipment are still needed.

Eight equipment addition transactions and nine equipment deletion transactions recorded from October 1, 2017 to June 30, 2018 were selected and tested. The following discrepancies were noted:

- **Capital Equipment Additions** – NSF incorrectly recorded the asset acquisition cost for two capital equipment transactions. Installation costs totaling \$28,416 were incorrectly excluded from the assets acquisition costs.
- **Capital Equipment Deletions** – NSF incorrectly reported the disposal of three capital equipment transactions from the prior year in the current year. However, all three assets were fully depreciated; thus, no financial impact was noted.

Suggestions:

We suggest that NSF:

1. Enhance policies and procedures to require the review and approval of asset costs (i.e., invoices, receiving reports, installation/upgrade costs, etc.) to identify all costs associated with placing the asset into service to ensure asset acquisition costs are recorded accurately.
2. Require and enforce the recent implementation of the new Capital Property Certificate of Disposal Form to ensure proper NSF COR approval and timely reporting of disposals for capital equipment deletions.

4. Payroll

NFR 2018-FR-04: Insufficient Controls over Payroll Personnel Actions and Time and Attendance (Note: This NFR is derived from the ‘Payroll Personnel Actions’ management letter comment noted on the table above)

Background:

During the new hire process at the National Science Foundation (NSF), employees are required to submit several documents to Human Resources Management (HRM), including Form I-9, *Employee Eligibility Verification*, and OF-306, *Declaration for Federal Employment*. Form I-9 is required to document verification of the identity and employment authorization of individuals hired for employment in the United States. Form OF-306 is required to determine individuals’ acceptability for Federal and Federal contract employment.

Following the hiring process, all employees are provided with Standard Form (SF)-50, *Notification of Personnel Action Form*, which is generated whenever there is a change in the employee’s personnel file. This form is also used when an employee separates from the agency. NSF’s *Onboarding and Separations Guide* mandates the actions required when an employee

separates from NSF. The employee's Administrative Manager initiates the separation process with a clearance e-mail that includes the employee's name and effective date of separation. The separating employee is then required to complete NSF Form 362, *Employee Separation Clearance*. This form is used to notify appropriate directorates and offices of the employee's pending separation so that they can take steps to collect property, terminate accounts, and collect badges. Once HRM processes this action in Federal Personnel/Payroll System (FPPS), a new SF-50 is generated to document the separation.

Additionally, all employees record their time and attendance using WebTA. Employees are required to notify their supervisors prior to taking leave. The notification can be in the form of an email or the Leave Request Form within WebTA. If the employees are taking leave for more than three consecutive days, then the Leave Request Form must be submitted and approved within WebTA.

Observations:

During the FY 2017 audit, NSF processed personnel actions in which the required documentation/forms were incomplete, missing, or untimely submitted. Although NSF has taken steps to resolve these issues in FY 2018, similar issues in NSF's payroll process related to new hires, separations, and time and attendance remain. As a result, NSF's internal controls over personnel actions and time and attendance still need improvement.

During testing over payroll personnel actions, we identified the following discrepancies:

- **New Hires**
 - Form I-9 *Employee Eligibility Verification* was not approved timely for one of the 38 employees tested. (i.e., the approving supervisor signed more than three business days after the employee's start date).
 - Form OF-306 *Declaration for Federal Employment* was not properly completed for 6 of the 38 employees tested. For five of these six, the OF-306 forms lacked evidence of the Appointing Officer's review (i.e. this review is evidenced by dating the form and these forms did not have a date notated) and for one the OF-306 form was missing the employee's second signature (i.e., the appointee's signature), which is required once the employee has on boarded to the agency.
- **Separations**
 - NSF Form 362 *Employee Separation Clearance* had 10 exceptions in the 37 employees tested (one employee had two exceptions). One form was not signed by employee, three forms were approved untimely (i.e., signed by the Supervisor more than 10 days after the employee left the agency), and six forms were completed untimely (i.e., form was not initiated five days prior to the employees last day worked). Additionally, during FY 2018, NSF developed a new automated process for separations, replacing the paper-based Form 362. This new process became effective October 1, 2018, after the scope of our audit.

- **Time and Attendance**

- Leave Request Form within WebTA was not approved for one episode of leave taken for more than three consecutive days for one of 78 employees tested.

Suggestions:

We suggest that NSF:

1. Develop and conduct trainings, on a periodic basis, to ensure NSF personnel (e.g., employees, supervisors, and Administrative Managers) are aware of their responsibilities during the new hire and separation process. Implement a workflow to properly track, maintain and ensure timely completion of the required forms/documentation regarding personnel actions (i.e., new hires).
2. Due to NSF's recent change to processing separations digitally, ensure internal controls are in place, followed, and in accordance with policies and procedures to submit and timely complete proper separation actions.

NEW MANAGEMENT LETTER COMMENTS

5. Information Technology

NFR 2018-IT-01: NSF Account Recertification Weakness

Observations:

NSF maintained a decentralized process to assign roles and job classes to NSF staff requiring roles and job classes to access application functions. The decentralized approach required that Deputy Division Directors approve annual recertification for access to certain systems and that Administrative Managers and Operations Specialists understand the access requirements at a detailed level for positions under their authority. Kearney & Company, P.C. (Kearney) noted weaknesses in NSF's recertification process for several of the systems in scope for FY 2018. Specifically, there was no evidence of recertification performed during the FY 2018 Awards Recertification process for 11 of 25 sampled Awards users. The 11 users were all from the Division of Acquisition and Cooperative Support (DACs). Additionally, Administrative Managers (AMs) and Operations Specialists (OSs) sampled from each of the following systems recertified their own access in FY 2018.

- *iTRAK* – Five (5) users who were AMs or OSs of the 45 sampled users performed the recertification of their own iTRAK access.
- *Awards* – Two (2) users who were AMs or OSs of the 25 sampled users performed the recertification of their own Awards access.
- *WebTA* – NSF confirmed that all AMs and OSs performed the recertification of their own WebTA access.

Note – The observations related to iTRAK and Awards were reported in the FY18 FISMA Independent Evaluation report and corrective actions will be followed-up on in FY19 FISMA Audit

Suggestions:

We suggest that NSF develop and implement a recertification process for AMs/OSs with access to WebTA that prohibits their ability to recertify their own access.

6. Information Technology

NFR 2018-IT-02: Awards Operating System (OS) and Database (DB) New User Provisioning

Observations:

Kearney & Company, P.C. (Kearney) sampled five (5) Operating System (OS)-layer users and found issues with four (4) of them. Specifically, administrators provisioned accounts without ClearQuest tickets (which document the request for access), submitting the ticket after the provisioning for three (3) of the four (4) users and failing to submit a ticket for the remaining user.

Kearney sampled two (2) Database (DB)-layer users and found issues with one (1) user. Administrators provisioned access to the DB without a ClearQuest ticket.

Suggestions:

We suggest that NSF implement a monitoring process to ensure that users are not provisioned access to the Awards OS and DB without confirmation of an approved ClearQuest ticket.



National Science Foundation
Office of Budget, Finance and Award Management

MEMORANDUM

Date: February 21, 2019
To: Mark Bell, Assistant Inspector General for Audit
From: Teresa Grancorvitz, Chief Financial Officer and Head/BFA
Subject: Management Response to Fiscal Year 2018 Management Letter

This memorandum acknowledges the receipt of the Kearney and Company's Fiscal Year 2018 Management Letter on February 20, 2019.

As previously stated during the Notice of Findings and Recommendations process, we generally agree with all the recommendations to improve the National Science Foundation's operations. We value Kearney and Company's hard work and professionalism throughout the audit process and appreciate the opportunity to respond to the letter.

If you have any questions or require additional information, please contact Mike Wetklow, Deputy Chief Financial Officer at (703) 292-8280.